We claim:

1. An optical device, comprising:

at least one waveguide for carrying an optical signal; and

at least one mirror having an adjustable position to vary a path length of said optical signal.

2. The optical device according to claim 1, wherein said mirror is controlled by a micromachine control element that positions said mirror in a desired position along an optical path.

3. The optical device according to claim 1, wherein said mirror is positioned at an end of said at least one waveguide.

4. The optical device according to claim 1, wherein said mirror is fabricated in the waveguide material deposited on a substrate.

5. The optical device according to claim 1, wherein said optical signal is a wavelength-division multiplexed (WDM) signal comprising N wavelength channels and wherein said optical device further comprises a demultiplexer for producing a plurality of demultiplexed output signals from said input WDM signal and at least one mirror associated with each of said N wavelength channels.

6. The optical device according to claim 5, wherein a plurality of said waveguides carry each of said N wavelength channels.

7. A method for adjusting a phase of an optical signal, said method comprising the steps of:

receiving said optical signal; and

adjusting a position of a mirror along a path of said optical signal.

8. The method according to claim 7, wherein said adjusting step is performed by a micromachine control element that positions said mirror in a desired position along an optical path.

9. The method according to claim 7, wherein said mirror is positioned at an end of at least one waveguide.

10. The method according to claim 7, wherein said mirror is fabricated from a waveguide deposited on a substrate.

11. The method according to claim 7, wherein said optical signal is a wavelength-division multiplexed (WDM) signal comprising N wavelength channels and wherein said method further comprises the step of demultiplexing said optical signal to produce a plurality of demultiplexed output signals from said input WDM signal.

12. An optical switch, comprising:

means for receiving said optical signal;

means for splitting said optical signal into at least two optical components;

a moveable mirror for adjusting a phase of at least one of said optical components by adjusting a position of said mirror along a path of said optical component; and

means for recombining said at least two optical components.

13. The optical switch of claim 12, wherein said means for receiving comprises at least one waveguide for carrying said optical signal.

14. The optical switch of claim 12, wherein said means for splitting and recombining said optical signals is a coupler region between two adjacent waveguides, a star coupler, an arrayed waveguide router or a multimode interference waveguide.

15. The optical switch of claim 12, wherein said mirror is controlled by a micromachine control element that positions said mirror in a desired position along an optical path.

16. The optical device of claim 12, wherein said mirror is positioned at an end of said at least one waveguide.

17. The optical device of claim 12, wherein said mirror is fabricated from waveguide material deposited on a substrate.

18. The optical device of claim 12, wherein said optical signal is a wavelength-division multiplexed (WDM) signal comprising N wavelength channels and wherein said optical switch further comprises a demultiplexer for producing a plurality of demultiplexed output signals from said input WDM signal and at least one mirror associated with each of said N wavelength channels.

19. A method for switching an optical signal, said method comprising the steps of:

receiving said optical signal;

splitting said optical signal into at least two optical components;

adjusting a phase of at least one of said optical components by adjusting a position of a mirror along a path of said optical component; and

recombining said at least two optical components.

20. The method according to claim 19, wherein said adjusting step is performed by a micromachine control element that positions said mirror in a desired position along an optical path.

21. The method according to claim 19, wherein said optical signal is a wavelength-division multiplexed (WDM) signal comprising N wavelength channels and

wherein said method further comprises the step of demultiplexing said optical signal to produce a plurality of demultiplexed output signals from said input WDM signal.